

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

Ag 84M
Cip. 2



United States
Department of
Agriculture

Forest
Service

Miscellaneous
Publication
Number 1377

October 1979

A Self-Help Method for Solving Fire Problems



Preface

So you think you've got problems! Sure you have. That's why this booklet was written. It is a **self-help** method for solving fire prevention problems for rural fire departments. It also provides a source list of places where materials, books, and technical assistance may be available to help with fire prevention plans and projects.

Fire prevention doesn't just happen. People cause fires and people prevent fires. This booklet provides a systematic "people process" to aid in fire prevention planning.

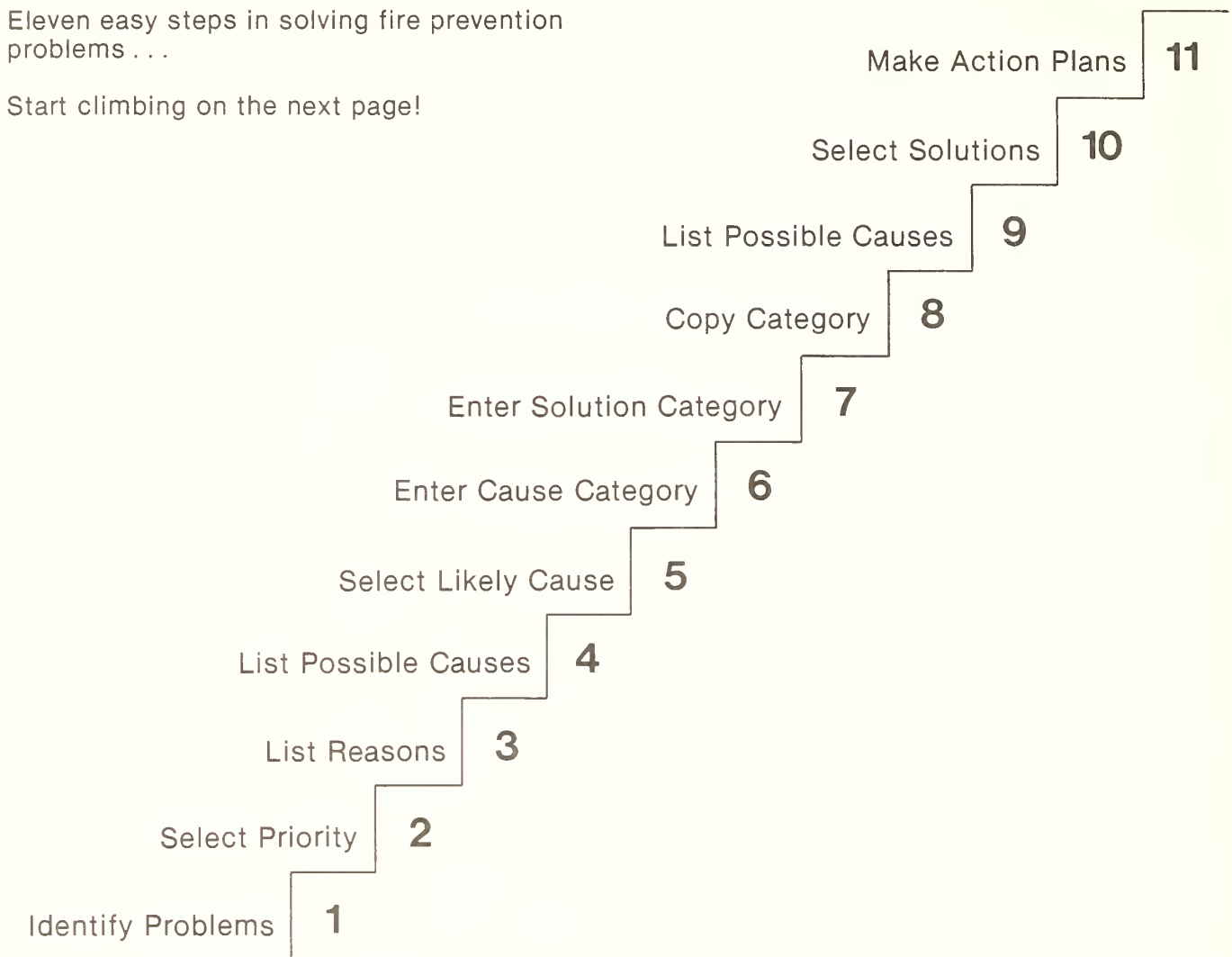
This booklet was prepared by the U.S. Department of Agriculture, Forest Service under authority of the Rural Development Act, 1972, Title IV, Public law 96-419.

Cover photo: Missouri Department of Conservation

A Stairway to Success

Eleven easy steps in solving fire prevention problems . . .

Start climbing on the next page!



Introduction

Which fires hurt your community the most in terms of loss of life, property, income, and jobs? What potential fires could cause you serious problems even though you **have not** experienced them yet? The answers to these two questions are the fire problems that need your immediate attention.

Complete step-by-step instructions with examples are provided. By selecting one of your problem fires and working with it through the instructions and examples you should arrive at a solution or solutions to that fire problem.

Problem Solving

Step 1 Example

Identify those fire problems that need immediate attention as best you can in terms of **where** the fires are occurring, **what** is causing them, **when** they occur, and **who** causes them.

Where	What	When	Who
North town	Burning trash	Hot-windy days	Housewives
Vacant lots	Grass fires	10 AM - 5 PM	Children
Kitchen	Grease fire	5 - 7 PM	Housewives
Living room	Smoking fire	Night	Resident

Step 2 Example

Refer back to **Step 1** where you listed your fire problems. From this list select one fire problem that you want to solve and answer the following questions in detail. (**Burning trash** is the fire problem selected in this example.)

What: Burning trash

Who: Housewives in North town

When: During hot, dry, and windy days.

Where: Near grassy vacant lots, and next to undeveloped areas with brush and trees.

Step 1

Identify those fire problems that need immediate attention as best you can in terms of **where** the fires are occurring, **what** is causing them, **when** they occur, and **who** causes them.

Where	What	When	Who

Step 2

Refer back to **Step 1** where you listed your fire problems. From this list select one fire problem that you want to solve and answer the following questions in detail.

What: _____

Who: _____

When: _____

Where: _____

Step 3 Example

Now, write down **all** the possible reasons for these fires starting that you and your firefighters can think of. (Do not fill in the blocks on the right—this will come later. Just brainstorm for possible reasons.)

A. <i>Housewives don't know about fire danger</i>	
B. <i>Local ordinance permits trash burning at anytime</i>	
C. <i>Housewives don't know safe way to burn trash</i>	
D. <i>Burning barrels are not safe</i>	

Let's now look at a system that will help you determine the solutions to your problems.

All causes can be explained by one or more of the following three **cause categories**.

Cause Category No.	Cause Category
1	People are not aware of the problem or they lack the skills necessary to avoid causing fires. (Example: People don't know that 30 amp fuses in a 15 amp circuit may overload wires.)
2	Conditions , surroundings, or equipment interfere with proper fire safety. (Example: Building codes are outmoded.)
3	People won't do what they know should be done. (Example: Local officials reluctant to update codes.)

For each category of causes, there is a corresponding **solution category**.

Solution Category No.	Solution Category
1	People must be educated and/or trained to overcome lack of awareness and skills. (Example: Utility company to provide brochure on fuse safety.)
2	Conditions, surroundings, or equipment must be redesigned or modified to ensure proper fire safety. (Example: Update building codes on regular basis.)
3	People must be motivated or given incentives to correct unsafe situations or practices. (Example: Convince local officials of need to update codes.)

Step 3

Now write down **all** the possible reasons for these fires starting that you and your firefighters can think of. (Do not fill in the blocks on the right—this will come later. Just brainstorm for possible reasons.)

A.	
B.	
C.	
D.	
E.	

Let's now look at a system that will help you determine the solutions to your problems.

All causes can be explained by one or more of the following three **cause categories**.

Cause Category No.	Cause Category
1	People are not aware of the problem or they lack the skills necessary to avoid causing fires. (Example: People don't know that 30 amp fuses in a 15 amp circuit may overload wires.)
2	Conditions , surroundings, or equipment interfere with proper fire safety. (Example: Building codes are outmoded.)
3	People won't do what they know should be done. (Example: Local officials reluctant to update codes.)

For each category of causes, there is a corresponding **solution category**.

Solution Category No.	Solution Category
1	People must be educated and/or trained to overcome lack of awareness and skills. (Example: Utility company to provide brochure on fuse safety.)
2	Conditions, surroundings, or equipment must be redesigned or modified to ensure proper fire safety. (Example: Update building codes on regular basis.)
3	People must be motivated or given incentives to correct unsafe situations or practices. (Example: Convince local officials of need to update codes.)

Step 4 Example

Refer to the system outline on page 6. Identify the possible **cause category** for each reason and place the proper number in the blocks at the right hand edge of page in **Step 3**, on page 6.

Cause Category #1 refers to a situation in which the action is performed or not performed because the person is not aware of proper action or lacks the necessary skills to do so.

Cause Category #2 refers to situations in which the surrounding conditions interfere with proper fire safety.

Cause Category #3 refers to situations in which people use unsafe practices or permit unsafe situations because they lack the motivation or the incentive to do better.

Step 5 Example

Select the *most likely cause category* from page 6 that fits your selected fire problem (Step 2) and write it in below.

The housewives are not aware of the trash burning problem or lack the skills necessary to avoid causing fires.

Step 6 Example

1 In box at left, enter the **cause category number** that you assigned to the *most likely cause category*.

Step 7 Example

1 In the box at the left enter the **solution category number** on page 6 which corresponds to the **cause category** selected in Step 6. (Note: This should be the same number as the one you selected in Step 6.)

Remember the three **solution categories**:

1. People must be educated and/or trained to overcome their lack of awareness and skills.
2. Conditions, surroundings, or equipment must be redesigned or modified to ensure proper fire safety.
3. People must be motivated or given incentives to correct unsafe situations or practices.

Step 8 Example

Copy the **solution category** statement you selected in Step 7. (One of the three described in Step 7.)

People must be educated and/or trained to overcome their lack of awareness and skills.

Step 4

Refer to the system outline on page 6. Identify the possible **cause category** for each reason and place the proper number in the blocks at the right hand edge of page in **Step 3**, on page 6.

Cause Category #1 refers to a situation in which the action is performed or not performed because the person is not aware of proper action or lacks the necessary skills to do so.

Cause Category #2 refers to situations in which the surrounding conditions interfere with proper fire safety.

Cause Category #3 refers to situations in which people use unsafe practices or permit unsafe situations because they lack the motivation or the incentive to do better.

Step 5

Select the *most likely* **cause category** from page 6 that fits your selected fire problem (Step 2) and write it in below.

Step 6

In box at left, enter the **cause category number** that you assigned to the *most likely cause category*.

Step 7

In the box at the left enter the **solution category number** on page 6 which corresponds to the **cause category** selected in Step 6. (Note: This should be the same number as the one you selected in Step 6.)

Remember the three **solution categories**:

1. People must be educated and/or trained to overcome their lack of awareness and skills.
2. Conditions, surroundings, or equipment must be redesigned or modified to ensure proper fire safety.
3. People must be motivated or given incentives to correct unsafe situations or practices.

Step 8

Copy the **solution category** statement you selected in Step 7. (One of the three described in Step 7.)

Step 9 Example

Apply the statement in Step 8 to your situation in Step 5 and list as many possible **solutions** as you and your firefighters can think of.

1. Develop and use local TV spots showing how to properly burn trash.
2. Develop and use local TV spots showing results of careless burning (grass brush-timber fires and houses burning).
3. Print instructions, photographs, and the "do's" and "don'ts" of trash burning. Distribute via school children.
4. Put announcements on radio when weather conditions are hazardous for burning.
5. Put on demonstrations showing a proper burning barrel, how to clear around the barrel, and correct ways to burn.

Step 10 Example

From the list in Step 9, select the most productive **solutions** and the most likely for you to accomplish using your available resources or outside help. List them by priority. (You must consider each of the **solutions** and in your judgment decide, by priority, which you will work on first. For instance:)

- # 3. Print instructions, photographs, and the "do's" and "don'ts" of trash burning. Distribute via school children.

Step 11 Example

Decide on a plan of action to accomplish the projects selected in Step 10 and write the answers to the questions below. Sources of assistance and ideas are available on pages 16 through 23.

Step 9

Apply the statement in Step 8 to your situation in Step 5 and list as many possible **solutions** as you and your firefighters can think of.

1.

2.

3.

4.

5.

Step 10

From the list in Step 9, select the most productive **solutions** and the most likely for you to accomplish using your available resources or outside help. List them by priority.

Step 11

Decide on a plan of action to accomplish the projects selected in Step 10 and write the answers to the questions below. Sources of assistance and ideas are available on pages 16 through 23.

Project #1 Example

(Write down in your own words your plan of action to accomplish the selected projects to solve your fire problem.)

What needs to be done? *Take pictures of a trash barrel in good condition with proper screen and safe clearing limits and make a brochure.*

Who is going to do it? *Firefighter Tom Jones who has the ability to take photographs and prepare artwork.*

Where will it be done? *In the backyard of a firefighter's home. Printing by the local newspaper editor.*

When will it be done? *Pictures this month. Prepare layout for brochure and print it the following month - before the hot summer winds.*

How will it be done? *Through coordination and association with local newspaper editor and using the talents of the fire department members.*

Reporting date of accomplishment: *December 1, 1979*

Project review and revision: *June 1, 1980*

(See page 15 for additional assistance.)

See **Appendix A** for additional information on assistance for **solution category**.

(Continue with projects that will solve your fire problem from your list in Step 9.)

Project #1

(Write down in your own words your plan of action to accomplish the selected projects to solve your fire problem.)

What needs to be done? _____

Who is going to do it? _____

Where will it be done? _____

When will it be done? _____

How will it be done? _____

Reporting date of accomplishment: _____

Project review and revision: _____

(See page 15 for additional assistance.)

See **Appendix A** for additional information on assistance for **solution category**.

Project #2

What needs to be done? _____

Who is going to do it? _____

Where will it be done? _____

When will it be done? _____

How will it be done? _____

Reporting date of accomplishment _____

Project review and revision _____

Project #3

What needs to be done? _____

Who is going to do it? _____

Where will it be done? _____

When will it be done? _____

How will it be done? _____

Reporting date of accomplishment _____

Project review and revision _____

(Repeat the same for as many projects you feel are necessary.)

**Project Review
and Revision**

A. General

Your fire prevention projects, when completed, will be based on past statistics and conditions, both existing and foreseeable. To remain dynamic they will need revising and updating to reflect changing problems, developments, and new equipment. While no specific time interval is designated for this, the Fire Chief must periodically evaluate the plan against the results. As a minimum, prevention activities should be evaluated annually.

B. Fire Prevention Project Statistics

To easily and quickly evaluate a project, a cumulative total of various statistics should be maintained for each year.

Number of fires: _____

Type of fires: _____

Losses: _____

Calendar date: _____

Time of day: _____

Cause: _____

Discovered by: _____

Reported by: _____

Action taken: _____

A review of these statistics at least annually will help you to know the effectiveness of your prevention program and/or changes needed.

Sources of Help

The following pages contain ideas, programs, sources of information, and help to assist you to implement the projects that you have chosen to solve your fire problem. These lists are grouped to relate to the **solution categories**:

1. Education and training
2. Correcting conditions, surroundings, and equipment
3. Motivating and changing attitudes

The first part of each list includes actions and ideas that can be carried out with local skills and resources.

The last part of each list includes outside assistance. Addresses are included in appendices.

This list is by no means complete, but a way to get started.

If you need assistance contact your:

State Forester
Fire Marshal
Extension Fire Service
Other Fire Department

1. Education and Training—Actions that can be taken to inform, educate, and train those people who are causing the fire problem.

- ___ Training sessions
- ___ Local radio announcements
- ___ Visits to service clubs
- ___ Inspections
- ___ Newspaper articles and editorials
- ___ Parades
- ___ School visits
- ___ Word-of-mouth
- ___ Exhibits and displays
- ___ Fire department members and auxilliary

Other ideas:

- Sparky Club membership—National Fire Protection Association (NFPA)
- Posters from NFPA
- Posters from United States Fire Administration (USFA)
- Posters from Hartford Insurance Company. (Director, Fire Safety Education, The Hartford Insurance Group, Hartford Plaza, Hartford, CT 06115)
- Posters from your State Fire Marshal (See Appendix for address)
- Junior Forest Ranger Club (Smokey Bear Headquarters, Washington, DC 20252)
- Films—NFPA, USFA, Forest Service, State Forester (See Appendix)
- Handouts from Insurance Services Office (ISO) (Local level)

2. Conditions, Surroundings, or Equipment—Actions that can be taken to change or modify conditions, surroundings, or equipment that interfere with proper fire safety.

- County Government codes and laws
- Hazard reduction (Clean up around homes, yards, out-buildings, alleys, and businesses of trash, litter, paper, rags, etc., that could easily catch fire.)
- Fuels management (Prescribed and controlled burning of ground fuels to avoid wildfires.)
- Inspections
- Fireproofing with paints
- Fireproofing vacation homes

Other:

- ___ Codes
- ___ National Fire Protection Association (NFPA)
- ___ U.S. Fire Administration (USFA)
- ___ Insurance Services Office (ISO)
- ___ Restrictions and closures—State Forester
- ___ State Fire Marshal
- ___ Land use development guides
- ___ Public utilities and railroads
- ___ Federal Agencies which regulate
- ___ Association of American Railroads (American Railroad Bldg.,
1920 L Street, NW, Washington, DC 20036)
- ___ Spark Arrestor Guide—Local Forest Service office
- ___ Underwriters Laboratories, Chicago, Illinois
- ___ Smokey Bear material (State Forester's office)
- ___ State Forester
- ___ Publications list

Other ideas: _____

3. People Won't Do What They Know Should Be Done—Actions that will motivate or give incentives to people to correct unsafe actions, procedures, or situations.

- Fire investigation
- Law enforcement
- Service clubs
- Inspections
- Involve citizens in plan
- Contests
- Visit schools
- Parades
- Follow-up after fires
- Awards
- Sell smoke detectors

Other: _____

- Laws
- Films
- Tax incentives
- Insurance rates
- "America Burning" Publication (USFA)

Other:

Operators and owners manuals

Safety matches

Home fire safety guides and checklists

Publications (See Appendix)

Other: _____

Appendix A

National Fire Protection Association Publications That Can Be of Assistance When Solution Category One Is Indicated

Codes, Standards, and Manuals

NFPA 31	Installation of Oil Burning Equipment
NFPA 32	Dry Cleaning Plants
NFPA 33	Spray Application Using Flammable and Combustible Materials
NFPA 34	Dip Tanks Containing Flammable or Combustible Liquids
NFPA 36	Solvent Extraction Plants
NFPA 40E	Storage of Pyroxylin Plastic
NFPA 46	Outdoor Storage of Forest Products
NFPA 47	Retail and Wholesale Lumber Storage Yards
NFPA 49	Hazardous Chemicals Data
NFPA 50	Bulk Oxygen Systems at Consumer Sites
NFPA 51B	Fire Prevention in Use of Cutting and Welding Processes
NFPA 61B	Prevention of Fire and Dust Explosions in Grain Elevators & Bulk Grain Handling Facilities
NFPA 70B	Electrical Equipment Maintenance
NFPA 78	Lightning Protection Code
NFPA 82	Incinerators, Rubbish Handling
NFPA 85	Prevention of Furnace Explosions in Fuel-Oil and Natural Gas-Fired Single Burner Boiler-Furnaces
NFPA 96	Vapor Removal from Cooking Equipment
NFPA 224	Homes and Camps in Forest Areas
NFPA 303	Fire Protection Standard for Marinas & Boatyards
NFPA 395	Storage of Flammable and Combustible Liquids on Farms and Isolated Construction Projects
NFPA 407	Aircraft Fuel Servicing
NFPA 501A	Installation of Mobile Homes
NFPA 501B	Mobile Homes
NFPA 501D	Recreational Vehicle Parks
NFPA 512	Truck Fire Protection
NFPA 704	Identification of the Fire Hazards of Materials
NFPA 1122L	Code for Unmanned Rockets
No. SPP-40	Fire Safety in the Home (Reference Book)

Films

No. FL-13	Holding Hands—for Children
No. FL-1	Help Prevent Fires
No. FL-14	Hot Cords Can Burn
No. FL-39	Playing with Fire
No. FL-34	The Great Chelsea Fire
No. FL-41	Learn Not to Burn
No. FL-32	Hot Stuff
No. FL-28	Liquids Can Burn
No. FL-29	Where's Tommy?
No. FL-36	Don't Get Burned
No. FL-38	You and Yours
No. FL-11A	Read the Label—and Live
No. FL-19	Fire—Not in My House

Posters, Pamphlets, Etc.

No. FPW-77	Fire Prevention Week Poster
No. FPW-6	Fire Prevention Week Coloring Sheet
No. FPW-4	Facts About Fire
No. XMAS-77	New Winter Fire Safety Poster
No. G-120	Christmas Checklist
No. G-102	Home Heating Devices Folder
No. SCU-77	Sparky Spring and Summer Clean-Up Poster
No. G-94A	Clean-Up at Home and Work
No. G-111	Don't Play with Fire Outdoors
No. SCU-4	Spring Clean-Up Coloring Sheet
No. G-8B	Fire Prevention All Over Your Home
No. G-8BSP	(Same as above in Spanish.) Prevención Contra el Fuego por Todo el Hogar
No. G-32A	Babysitter Handbook
No. G-56	Home Fire Check Sheet
No. G74A	Fire, Electricity & Your Home
No. G-104	Mobile Home Fire Check
No. G-105A	Home Fire Detection

No. G-115	Fire in the Kitchen?	No. H-23	"Careful" Smoking
No. G-101	Fire Is Heat, Air, Fuel, Together	No. G-55A	School Inspection Check List
No. G-117	Fire Safety Stickers	No. G-40	Industrial Plant Self-Inspection
No. PM-7	Crisscross Fire Prevention Game Place Mat	No. G-42B	Store Fire Safety Check List
No. PM-10	Home Fire Prevention Game Place Mat	No. G-41	Restaurant Fire Safety Check List
NFPA	Learn Not to Burn Competition . . . An Awards Program to Prevent Fire	No. IN-7	No Smoking Flyer
No. G-109	You Can Prevent Hospital Fires		Sparky Materials for Fire Prevention Education

National Fire Protection Association Publications That Can Be of Assistance When Solution Category Two Is Indicated

Codes, Standards, and Manuals

NFPA 1	Fire Prevention Code	NFPA 85	Prevention of Furnace Explosions in Fuel-Oil and Natural Gas-Fired Single Burner Boiler-Furnaces
NFPA 30	Flammable & Combustible Liquids Code	NFPA 96	Vapor Removal from Cooling Equipment
NFPA 31	Installation of Oil Burning Equipment	NFPA 101	Life Safety Code
NFPA 32	Dry Cleaning Plants	NFPA 203M	Roof Coverings
NFPA 33	Spray Application Using Flammable and Combustible Materials	NFPA 211	Chimneys, Fireplaces, and Vents
NFPA 36	Solvent Extraction Plants	NFPA 220	Standard Types of Building Construction
NFPA 40E	Storage of Pyroxylin Plastic	NFPA 224	Homes and Camps in Forest Areas
NFPA 46	Outdoor Storage of Forest Products	NFPA	Fire Protection Standard for Marinas & Boatyards
NFPA 47	Retail and Wholesale Lumber Storage Yards	NFPA 395	Storage of Flammable and Combustible Liquids on Farms and Isolated Construction Projects
NFPA 49	Hazardous Chemicals Data	NFPA 407	Aircraft Fuel Servicing
NFPA 50	Bulk Oxygen Systems at Consumer Sites	NFPA 494L	Model State Fireworks Law
NFPA 51B	Fire Prevention in Use of Cutting and Welding Processes	NFPA 495	Code for Explosive Materials
NFPA 54	National Fuel Gas Code	NFPA 501A	Installation of Mobile Homes
NFPA 61B	Prevention of Fire and Dust Explosions in Grain Elevators & Bulk Grain Handling Facilities	NFPA 501B	Mobile Homes
NFPA 70-78	National Electrical Code	NFPA 501D	Recreational Vehicle Parks
NFPA 70A	Electrical Code for One- and Two-Family Dwellings	NFPA 112L	Code for Unmanned Rockets
NFPA 70L	Model State Electrical Law Inspection of Electrical Installations		1977 National Fire Codes, — (Complete one-of-a-kind 16 volume set)
NFPA 78	Lightning Protection Code	Films	
NFPA 82	Incinerators, Rubbish Handling	No. FL-19	Fire—Not in My House

National Fire Protection Association Publications That Can Be of Assistance When Solution Category Three Is Indicated

Codes, Standards, and Manuals

- NFPA 49** Hazardous Chemicals Data
NFPA 1122L Code for Unmanned Rockets
No. SPP-40 Fire Safety in the Home (Reference Book)

Slide Talks & Films

- No. SL-22** Hospital Fire, Osceola, Mo., Dec. 3, 1974
No. FL-47 Will Your Job Burn?
No. FL-42 Reasons for Caring
No. FL-13 Holding Hands—for Children
No. FL-1 Help Prevent Fires
No. FL-14 Hot Cords Can Burn
No. FL-44 "When Your Clothing Burns"
No. FL-39 Playing with Fire
No. FL-34 The Great Chelsea Fire
No. FL-41 Learn Not to Burn
No. FL-43 Hot Stuff
No. FL-28 Liquids Can Burn
No. FL-29 Where's Tommy?
No. FL-36 Don't Get Burned
No. FL-38 You and Yours
No. FL-11A Read the Label—and Live
No. FL-19 Fire—Not in My House!

Posters, Pamphlets, Etc.

- No. FPW-77** Fire Prevention Week Poster
No. FPW-6 Fire Prevention Week Coloring Sheet
No. FPW-4 Facts About Fire

- No. XMAS-77** New Winter Fire Safety Poster
No. G-120 Christmas Checklist
No. G-102 Home Heating Devices Folder
No. SCU-77 Sparky Spring and Summer Clean-Up Poster
No. G-94A Clean-Up at Home and Work
No. G-111 Don't Play with Fire Outdoors
No. SCU-4 Spring Clean-Up Coloring Sheet
No. G-88 Fire Prevention All Over Your Home
G-8BSP (Same as above in Spanish.) Prevención Contra el Fuego por Todo el Hogar
No. G-32A Babysitter Handbook
No. G-56 Home Fire Check Sheet
No. G-74A Fire, Electricity & Your Home
No. G-104 Mobile Home Fire Check
No. G-105A Home Fire Detection
No. G-115 Fire in the Kitchen?
NFPA Learn Not to Burn Competition . . . An Awards Program to Prevent Fires
No. H-23 "Careful" Smoking
No. G-55A School Inspection Checklist
No. G-40 Industrial Plant Self-Inspection
No. G-42B Store Fire Safety Checklist
No. G-41 Restaurant Fire Safety Checklist
No. IN-7 No Smoking Flyer
No. SCU-77 Sparky Spring and Summer Clean-Up Poster

Appendix B

State Foresters

State Forester
Alabama Forestry Commission
513 Madison Ave.
Montgomery, AL 36104
(205) 832-6587

State Forester
Division of Lands
323 East Fourth Ave.
Anchorage, AK 99501
(907) 279-5586 ext. 137

State Forester
State Land Department
1624 West Adams
Phoenix, AZ 85007
(602) 271-4633

State Forester
Arkansas Forestry Commission
3821 West Roosevelt Rd.
P.O. Box 4523—Asher Station
Little Rock, AR 72204
(501) 371-1734

Director
Department of Forestry
Resources Bldg.
1416 Ninth St.
Sacramento, CA 95814

State Forester
Colorado State Forest Service
Colorado State University
Fort Collins, CO 80523
(303) 482-8185 or 491-6304

State Forester
Dept. of Environmental Protection
Forestry Unit
165 Capitol Ave.
Hartford, CT 06115
(203) 566-5348

State Forester
Delaware Dept. of Agriculture
Forestry Section
Drawer D
Dover, DE 19901
(302) 678-4820

Director
Division of Forestry
Collins Bldg.
Tallahassee, FL 32304
(904) 488-4274

Director
Georgia Forestry Commission
P.O. Box 819
Macon, GA 31202
(912) 744-3237

Chief Division of Forestry
Government of Guam
Agana, GU 96910

State Forester
Division of Forestry
1179 Punchbowl St.
Honolulu, HI 96813
(808) 548-5930

Director
Idaho Department of Lands
State Capitol Bldg.
Boise, ID 83720
(208) 384-3280

Supervisor
Division of Forestry
605 State Office Bldg.
Springfield, IL 62706
(217) 782-2361

State Forester
Division of Forestry
613 State Office Bldg.
Indianapolis, IN 46204
(317) 633-6517

State Forester
State Conservation Commission
300 Fourth St.
Des Moines, IA 50319
(515) 281-5629

State and Extension Forester
Forestry Bldg.
2610 Claflin Rd.
Manhattan, KS 66502
(913) 532-5752

Director
Kentucky Division of Forestry
207 Holmes St.
Frankfort, KY 40601
(502) 564-4496

State Forester
Louisiana Forestry Commission
P.O. Box 1628
Baton Rouge, LA 70821
(504) 389-7361

Director
Bureau of Forestry
State Office Bldg.
Augusta, ME 04333
(207) 289-2791

Director
Forest Service
Tawes State Office Bldg.
Annapolis, MD 21401
(301) 267-5775

Director of Forests and Parks
Division of Forests and Parks
100 Cambridge St.
Boston, MA 02202
(617) 727-3180

State Forester
Department of Natural Resources
Box 30028
Lansing, MI 48909
(517) 373-1218

Director
Division of Forestry
658 Cedar St.
St. Paul, MN 55155
(612) 296-4484

State Forester
Mississippi Forestry Commission
908 Robert E. Lee Bldg.
Jackson, MS 39201
(601) 354-7124

State Forester
Missouri Department of
Conservation
2901 North Ten Mile Dr.
P.O. Box 180
Jefferson City, MO 65101
(314) 751-4115

Administrator
Division of Forestry
2705 Spurgin Rd.
Missoula, MT 59801
(406) 728-4300

Chairman
Dept. of Forestry and State Forester
201 Miller Hall, East Campus
University of Nebraska
Lincoln, NE 68503
(402) 472-2944 or 2963

State Forester
Division of Forestry
201 South Fall St.
Carson City, NV 89701
(702) 885-4350

Director
Division of Resources Development
Box 856, State House Annex
Concord, NH 03301
(603) 271-2214

State Forester
Bureau of Forestry
P.O. Box 2808
Trenton, NJ 08625
(609) 292-2520

State Forester
Dept. of Natural Resources
Division of Forestry
P.O. Box 2167
Santa Fe, NM 87501
(505) 827-2312

Director
Division of Lands and Forests
59 Wolf Rd.
Albany, NY 12233
(518) 457-7430

Director
Division of Forest Resources
P.O. Box 27687
Raleigh, NC 27611
(919) 829-4141

State Forester
North Dakota State University
First & Simrall Ave.
Bottineau, ND 58318
(701) 228-2277

Chief
Division of Forestry and Preserves
Fountain Square
Columbus, OH 43224
(614) 466-7842

Director and State Forester
Forestry Division
122 State Capitol Bldg.
Oklahoma City, OK 73105
(405) 521-3886

State Forester
Department of Forestry
2600 State St.
Salem, OR 97310
(503) 378-2511

Director
Bureau of Forestry
109 Evangelical Press Bldg.
Third & Reily Sts.
Harrisburg, PA 17120
(717) 787-2703

Commonwealth Forester
Forests, Fish, and Wildlife
Department of Agriculture
P.O. Box 5887, Pta. de Tierra
San Juan, PR 00906
(809) 765-5409

Chief
Division of Forest Environment
Box 545, RFD #2
North Scituate, RI 02857
(401) 647-3367

State Forester
South Carolina Commission of
Forestry
5500 Broad River Rd.
Columbia, SC 29202
(803) 758-2261

Director
Dept. of Game, Fish, and Parks
Division of Forestry
State Office Bldg. #1, Room 113
Pierre, SD 57501
(605) 224-3481

State Forester
Division of Forestry
2611 West End Ave., Room 302
Nashville, TN 37203
(615) 741-3326

Director
Texas Forest Service
College Station, TX 77843
(713) 845-2641

State Forester
1596 West North Temple
Salt Lake City, UT 84116
(801) 328-5439

Director of Forests
Department of Forests & Parks
State Office Bldg.
Montpelier, VT 05602
(802) 823-3375

State Forester
Virginia Division of Forestry
P.O. Box 3758
Charlottesville, VA 22903
(804) 977-6555

Director
V.I. Forestry Program
P.O. Box U
Kingshill, St. Croix
U.S. VI 00850
(809) 772-0990

Supervisor
Department of Natural Resources
Olympia, WA 98504
(206) 753-5331

State Forester
Department of Natural Resources
1800 Washington St., East
Charleston, WV 25305
(304) 348-2788 or 2789

Chief State Forester
Department of Natural Resources
P.O. Box 450
4610 University Ave.
Madison, WI 53701
(608) 266-2197

State Forester
Wyoming State Forestry Division
113 Capitol Bldg.
Cheyenne, WY 82002
(307) 777-7586

Appendix C

State Fire Marshals' Names & Addresses

ALABAMA

Roy L. Thornell, State Fire Marshal
445 South McDonough St.
Montgomery, AL 36104
(205) 832-5844

ALASKA

Ronald Hendrie, State Fire Marshal
Department of Public Safety
Division of Fire Prevention
Pouch N
Juneau, AK 99801
(907) 465-4332

ARIZONA

Robert J. Ross, State Fire Marshal
The Industrial Commission of
Arizona
P.O. Box 19070
Phoenix, AZ 85005
(602) 271-5062

ARKANSAS

Lieutenant W. R. Jones
Commander
Fire Marshal Section
Arkansas State Police
P.O. Box 4005
Little Rock, AR 72214
(501) 371-1846

CALIFORNIA

Philip Favro, State Fire Marshal
Suite 800
7171 Bowling Dr.
Sacramento, CA 95823
(916) 322-2370

COLORADO

None

CONNECTICUT

Edward P. Leonard, Jr.
State Police Commissioner, Fire
Marshal
Department of State Police
100 Washington St.
Hartford, CT 06106
(203) 566-4510

DELAWARE

J. Benjamin Roy, Jr., State Fire
Marshal
P.O. Box 109
Dover, DE 19901
(302) 734-8402

FLORIDA

Olin Green, Director, State Fire
Marshal
Larson Bldg., Room 447
Gaines St.
Tallahassee, FL 32304
(904) 488-8268

GEORGIA

John R. Gore, Jr., State Fire Marshal
Room 445
#7 Martin Luther King, Jr., Dr.
Atlanta, GA 30334
(404) 656-2064

HAWAII

Edwin H. Honda
Insurance Commissioner and
Fire Marshal
Fire Marshal Division
Department of Regulatory Agencies
P.O. Box 541
Honolulu, HI 96809
(808) 548-7580 or 7579

Lawrence Dunbar
Chief Deputy Fire Marshal
Department of Regulatory Agencies
P.O. Box 541
Honolulu, HI 96809

IDAHO

None

ILLINOIS

Benard L. Sadowski, State Fire
Marshal
Division of Fire Prevention
610 Army Bldg.
Springfield, IL 62706
(217) 782-7381

INDIANA

William C. Goodwin, State Fire
Marshal
502 Indiana State Office Bldg.
100 North Senate Ave.
Indianapolis, IN 46204
(317) 633-4778

IOWA

Wilbur R. Johnson, State Fire
Marshal
Capitol Hill Annex
523 East 12th St.
Des Moines, IA 50319
(515) 281-5821

KANSAS

Floyd H. Dibbern, State Fire
Marshal
211 West Seventh St.
Topeka, KS 66603
(913) 296-3401

KENTUCKY

Warren Southworth, State Fire
Marshal
Department of Insurance
Third Floor
Capitol Plaza Towers
Frankfort, KY 40601
(502) 564-3626

LOUISIANA

Raymond B. Oliver, State Fire
Marshal
106 State Office Bldg.
325 Loyola Ave.
New Orleans, LA 70112

MAINE

Donald M. Bisset, State Fire Marshal
or
C. F. Rogen, Director
Department of Public Safety
99 Western Ave.
Augusta, ME 04333
(207) 289-2481

MARYLAND

James C. Robertson, State Fire
Marshal
301 West Preston St.
Baltimore, MD 21201
(301) 383-2521

MASSACHUSETTS

Joseph A. O'Keefe, State Fire
Marshal
Department of Public Safety
Fire Prevention Bureau
1010 Commonwealth Ave.
Boston, MA 02133
(617) 566-4500

MICHIGAN

William Rucinski, Captain
Chief, Fire Marshal Division
Department of State Police
7150 Harris Dr.
Lansing, MI 48913
(517) 373-2820

MINNESOTA

Wes Werner
State of Minnesota
Department of Public Safety
Division State Fire Marshal
1246 University Ave.
St. Paul, MN 55104
(612) 296-3584 or 3585

MISSISSIPPI

Honorable George Dale
State Fire Marshal and Insurance
Commissioner
P.O. Box 79
Jackson, MS 39205
(601) 354-6304

MISSOURI

Robert Morrison, State Fire Marshal
State Department of Public
Health and Welfare
505 Missouri Blvd.
Jefferson City, MO 65101
(314) 751-2930

MONTANA

William A. Penttila, Chief
Department of Justice
(State Fire Marshal)
F. M. Bureau, State of Montana
1409 Helena Ave.
Helena, MT 59601
(406) 449-2050

NEBRASKA

Paul Sarnecki, State Fire Marshal
301 Centennial Mall South
Box 94677
Lincoln, NE 68509
(402) 471-2027

NEVADA

Daniel J. Quinan, State Fire Marshal
Room 302
Kincaid Bldg./Capitol Complex
505 East King St.
Carson City, NV 89710
(702) 885-4290

NEW HAMPSHIRE

Raymond Dewhurst, State Fire
Marshal
Department of Safety Bldg.
Hazen Drive
Concord, NH 03301
(603) 271-3336

NEW JERSEY

John McQuade, Jr., State Fire
Marshal
Department of Treasury
State House, Fourth Floor
Trenton, NJ 08625
(609) 292-3730

NEW MEXICO

Kenneth C. Moore, State Fire
Marshal
P.O. Drawer 1269
Santa Fe, NM 87501
(505) 827-2357

NEW YORK

Francis McGarry, Director
Department of State
(State Fire Marshal)
Division of Fire Prevention and
Control
162 Washington Ave.
Albany, NY 12231
(518) 474-6746

NORTH CAROLINA

John Randolph Ingram
Commissioner and Fire Marshal
State of North Carolina
Department of Insurance
P.O. Box 26387
Raleigh, NC 27611

NORTH DAKOTA

Vance Arneson, State Fire Marshal
Lock Box 1292
Bismarck, ND 58505
(701) 224-2434

OHIO

Terry E. Drake, State Fire Marshal
8895 East Main St.
Reynoldsburg, OH 43068
(614) 466-2633

OKLAHOMA

Jack C. Sanders, State Fire Marshal
Suite 100
4030 North Lincoln Blvd.
Oklahoma City, OK 73105
(405) 424-4371

OREGON

Clyde W. Centers, State Fire Marshal
103 Labor and Industries Bldg.
Salem, OR 97310
(503) 378-4917

PENNSYLVANIA

Kenneth W. Bender, Captain
Penn. State Police Headquarters
Fire Marshal Division
1800 Elmerton Ave.
Harrisburg, PA 17109
(717) 783-5529

RHODE ISLAND

Robert J. Voas
Fire Marshal
Division of Fire Safety
12 Humbert St.
North Providence, RI 02911
(401) 277-2335

SOUTH CAROLINA

Jesse C. Johnson, Director
Fire and Life Safety
(State Fire Marshal)
Division of General Service
300 Gervais St.
Columbia, SC 29201
(803) 758-2226

SOUTH DAKOTA

Joe Egger, State Fire Marshal
Department of Public Safety
Insurance Bldg.
300 Block North Nicollet
Pierre, SD 57501
(605) 224-3562

TENNESSEE

Gene Hartsook, Director
Department of Insurance
(State Fire Marshal)
Division of Fire Prevention
202 Capitol Towers
Nashville, TN 37219
(615) 741-2981

TEXAS

Charles Meadows, State Fire
Marshal
State Board of Insurance
1110 San Jacinto St.
Austin, TX 78786
(512) 475-4204

UTAH

Grant R. Walker, State Fire Marshal
101 State Capitol Bldg.
Salt Lake City, UT 84114
(801) 533-5318

VERMONT

William H. Bowman, Commissioner
Department of Public Safety
(State Fire Marshal)
Redstone Bldg.
Montpelier, VT 05602
(802) 828-2167

VIRGINIA

C. Suttan Mullen, Jr., State Fire
Marshal
P.O. Box 1157
Richmond, VA 23209
(804) 786-4751

WASHINGTON

Dick Marquardt, State Fire Marshal
Olympia Office
Insurance Bldg.
Olympia, WA 98504
(206) 753-3605J

WEST VIRGINIA

Walter Smittle, III, State Fire
Marshal
1800 Washington St. East
Charleston, WV 25305
(304) 348-2191

WISCONSIN

Philip C. Culp, State Fire Marshal
Room 415
123 West Washington Ave.
Madison, WI 53702
(608) 266-0333

WYOMING

Billy M. Weckwerth, State Fire
Marshal
Department of Fire Prevention and
Electrical Safety
720 West 18th St.
Cheyenne, WY 82002
(307) 777-7288

Appendix D

Resource Development Agencies

American Society of Safety Engineers
5 North Wabash Ave.
Chicago, IL 60602

Association of American Railroads
30 Vesey St.
New York, NY 10007

Building Officials and Code Administrators International,
Inc.
(BOCA International)
1313 East 60th St.
Chicago, IL 60637

Bureau of Explosives
Association of American Railroads
1920 L St. NW.
Washington, DC 20036

Combustion Institute (The)
986 Union Trust Building
435 Fifth Ave. and 523 Grant
Pittsburgh, PA 15219

Compressed Gas Association
500 Fifth Ave.
New York, NY 10036

Department of Agriculture
Forest Service
P.O. Box 2417
Washington, DC 20013

Department of Health, Education and Welfare
Hazardous Substances
RC-10, 200 C St. SW.
Washington, DC 20210

Department of Transportation
Chairman, Hazardous Materials Regulation Board
Sixth and D Sts. SW.
Washington, DC 20590

Department of the Interior
Coordinator of Explosives Research
Room 4559, Interior Building
18th and C Sts. NW.
Washington, DC 20240

"Educators Guide to Free Films"
Educator's Process Service
Randolph, WI 53956

Farmers Home Administration
U.S. Department of Agriculture
Washington, DC 20250

Federal Aviation Administration
Department of Transportation
800 Independence Ave. SW.
Washington, DC 20590

Fire Apparatus Manufacturers' Association
1718 Sherman Ave.
Evanston, IL 60201

Fire Insurance Rating Bureau
210 West Michigan Ave.
Milwaukee, WI 53203

Fire Marshals Association of North America
60 Batterymarch St.
Boston, MA 02110

Chief, Fire Research Center
Institute for Applied Technology
National Bureau of Standards
Washington, DC 20234

Insurance Services Office
Municipal Survey Service
160 Water St.
New York, NY 10038

International Association of Arson Investigators
1207 Esther Blvd.
Bryan, TX 77801

International Association of Fire Chiefs
232 Madison Ave.
New York, NY 10016

International Association of Fire Fighters
905-16th St. NW., Suite 404
Washington, DC 20006

International Film Bureau, Inc.
332 South Michigan Ave.
Chicago, IL 60604

International Fire Service Training Association
Fire Protection Publications
Building Q2, Room 20
Oklahoma State University
Stillwater, OK 74074

International Society of Fire Service Instructors
Fire Service Extension
University of Maryland
College Park, MD 20740

Interstate Commerce Commission
Department of Transportation
Hazardous Materials Regulation Board
Sixth and D Sts. SW.
Washington, DC 20590

LP — Gas Administrator
P.O. Box 334
Capitol Station
Oklahoma City, OK 73105

Model Codes Standardization Council
c/o National Bureau of Standards
Center for Building Technology
Gaithersburg, MD 20760

National Audiovisual Center
Eighth St. and Pennsylvania Ave. NW.
Washington, DC 20408

United States Fire Administration
U.S. Department of Commerce
Washington, DC 20230

National Fire Protection Association
470 Atlantic Ave.
Boston, MA 02210

National LP — Gas Association
79 West Monroe St.
Chicago, IL 60603

☆ U.S. GOVERNMENT PRINTING OFFICE : 1979 O-302-641

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

Stock Number 001-000-04065-1

